

CLAIMS

1. A thermoplastic elastomer composition
which comprises an isobutylene block copolymer (A)
5 containing a polymer block composed predominantly of
isobutylene and a polymer block composed predominantly of an
aromatic vinyl compound and
an alkenyl-terminated isobutylene polymer (B).
- 10 2. The thermoplastic elastomer composition according
to Claim 1,
wherein the alkenyl-terminated isobutylene polymer (B)
is at least one polymer selected from the group consisting
of
15 (B-1) an alkenyl-terminated isobutylene homopolymer or
an alkenyl-terminated isobutylene random copolymer, and
(B-2) a modified alkenyl-terminated isobutylene block
copolymer comprising a polymer block composed
predominantly of isobutylene and a polymer block composed
20 predominantly of an aromatic vinyl compound.
3. The thermoplastic elastomer composition according
to Claim 1 or 2,
wherein the alkenyl-terminated isobutylene polymer (B)
25 is an allyl-terminated polymer obtainable by substitution

reaction of terminal chlorine atom of the isobutylene polymer with allyltrimethylsilane.

4. The thermoplastic elastomer composition according
5 to any of Claims 1 to 3,

wherein the alkenyl-terminated isobutylene polymer (B) is crosslinked dynamically in melt-mixing of the isobutylene block copolymer (A) with the alkenyl-terminated isobutylene polymer (B).

10

5. The thermoplastic elastomer composition according to any of Claims 1 to 3,

wherein the alkenyl-terminated isobutylene polymer (B) is crosslinked in a stage preceding the blending with
15 isobutylene block copolymer (A).

6. The thermoplastic elastomer composition according to any of Claims 1 to 5,

wherein the block constituting the isobutylene block
20 copolymer (A) is a triblock copolymer comprising a polymer block (a) composed predominantly of isobutylene and a polymer block (b) composed predominantly of an aromatic vinyl compound and having the structure represented as (b)-(a)-(b).

25

7. The thermoplastic elastomer composition according to any of Claims 1 to 6,
which further comprises a crosslinking agent (C).

5 8. The thermoplastic elastomer composition according to Claim 7,
wherein the crosslinking agent (C) is a hydrosilyl group-containing compound.

10 9. The thermoplastic elastomer composition according to any of Claims 1 to 8,
which further comprises a plasticizer (D).

15 10. The thermoplastic elastomer composition according to Claim 9,
wherein the plasticizer (D) is at least one selected from the group consisting of paraffinic mineral oil and naphthene mineral oil.

20 11. The thermoplastic elastomer composition according to any of Claims 1 to 10,
which further comprises a reinforcing material (E).

25 12. The thermoplastic elastomer composition according to Claim 11,

wherein the reinforcing material (E) is at least one selected from the group consisting of polystyrene, polyphenylene ether and mixture thereof.

5 13. The thermoplastic elastomer composition according to any of Claims 1 to 12,

 wherein the alkenyl-terminated isobutylene polymer (B) is a polymer having weight average molecular weight of 1,000 to 500,000 and containing at least 0.2 alkenyl groups per
10 molecule at the molecular chain terminus.

 14. The thermoplastic elastomer composition according to any of Claims 1 to 13,

 which comprises 5 to 1000 weight parts of isobutylene
15 block copolymer (A) per 100 weight parts of the alkenyl-terminated isobutylene polymer (B).